

**AMENDMENTS TO THE DRAWINGS**

Figs. 3 and 4 have been labeled as “Prior Art”

Attachment: Two (2) Replacement Drawing Sheets (including sheets numbered 3/4 and 4/4,  
and Figs. 3, and 4)

### **REMARKS**

Claims 1-3 are all the claims pending in the application. Claim 3 has been withdrawn from consideration by the Examiner. Reconsideration and allowance of all the claims are respectfully requested in view of the following remarks.

### **Election/Restriction**

Claim 3 has been withdrawn from consideration by the Examiner as being drawn to a non-elected species.

### **Drawings**

The Examiner asserted that Figs. 3 and 4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. Accordingly, Figs. 3 and 4 have been labeled as --Prior Art--.

### **Claim Objections**

The Examiner objected to claim 1 as including informalities. Specifically, the Examiner asserted that in line 40, “carrier” (1<sup>st</sup> occurrence) should be changed to --ring-- because “the third carrier” is recited twice in lines 39-40. Accordingly, in line 40, “carrier” (1<sup>st</sup> occurrence) has been changed to --ring gear--.

### **Claim Rejections - 35 U.S.C. § 112**

- The Examiner rejected claims 1 and 2 under §112, 1<sup>st</sup> paragraph, as failing to comply with the enable requirement. Specifically, the Examiner asserts that in the recitation “the output shaft is stopped while the input shaft is rotating” is unclear as to how the output shaft is stopped while the input shaft is rotating. Applicant respectfully traverses this rejection because the specification does, indeed, disclose how the output shaft is stopped while the input shaft is rotating. See page 29, line 4-page 32, line 12, for example.

To more specifically illustrate how the output shaft is stopped while the input shaft is rotating, attached is a drawing (Explanatory Fig. A) showing in graph form the relationship between  $e_{CVT}$  (the speed ratio of the entire CVT apparatus) and  $e_{CVU}$  (the speed ratio of toroidal CVT in the low speed mode), which is expressed by the equation (1) disclosed on page 29 of the specification.

In equation (1), the values of  $i_1$ ,  $R_{OPG}$ , and  $R_{IPG}$  can be arbitrarily selected. However, as read from Fig. 1, these values are for example as follows:  $i_1 = 2.2$ ;  $R_{OPG} = 0.7$ ;  $R_{IPG} = 0.9$ .

The abscissa in the graph indicates the value of  $e_{CVT}$  and the ordinate the value of  $e_{CVU}$ . The point of 0 in the abscissa indicates that point where “the output shaft is stopped while the input shaft is rotating.” At this point,  $e_{CVU}$ , the speed ratio of the toroidal CVT, is expressed by the equation (2) in the specification. (When the values of  $i_1$ ,  $R_{OPG}$ , and  $R_{IPG}$  are as the above,  $e_{CVU}$  will be -1.71, corresponding to 0 on the abscissa).

In the region of the left side of the point where “the output shaft is stopped while the input shaft is rotating”, the speed ratio of the entire CVT is negative so that the transmission goes reversely. In the right side of the point, the transmission goes forward.

As discussed above, the toroidal CVT apparatus enables the output shaft to rotate in the forward direction or in the reverse direction and to stop between the forward and reverse rotating states, by controlling the transmission ratio of the toroidal CVT through use of the differential mechanism of the planetary gear.

- The Examiner rejected claims 1 and 2 under §112, 2<sup>nd</sup> paragraph, as indefinite. The Examiner indicated specific instances of indefiniteness in item 9 on page 4 of the Office Action. Applicants have amended claims 1 and 2 in a manner believed to overcome this rejection.

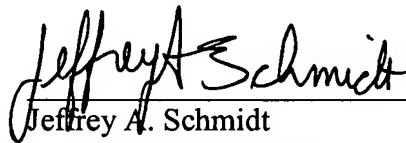
### **Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

Handwritten signature of Jeffrey A. Schmidt in black ink, written over a horizontal line.

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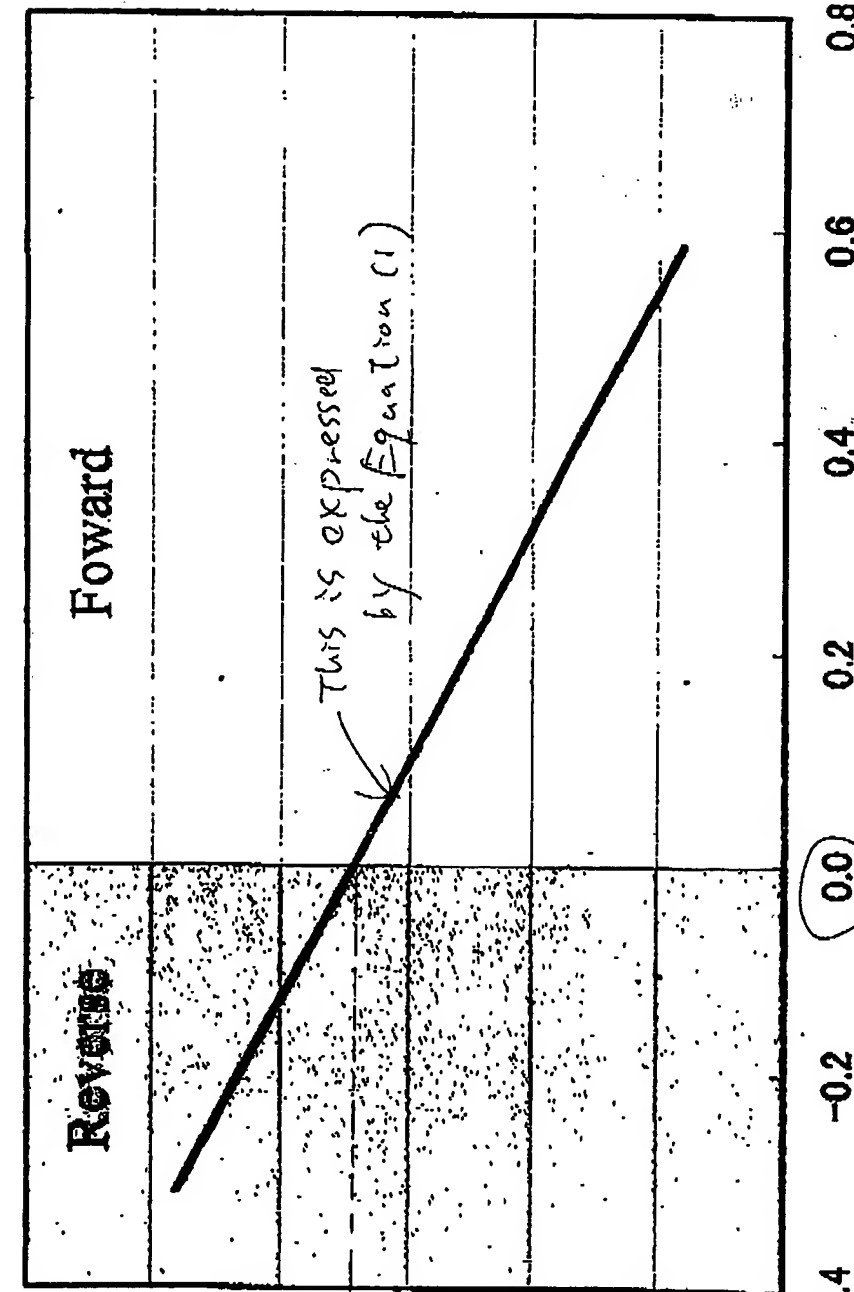
**23373**

CUSTOMER NUMBER

Date: January 30, 2006.

# EXPLANATORY FIG. A

## Low Speed Mode



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This is expressed  
by the Equation (1)

$e_{CVU}$

Equation (2)

$e_{CVU}$

$$= -\frac{R_{OPG} \cdot i_1}{R_{IPG}}$$

$$= -\frac{0.7}{0.9} \cdot 2.2$$

$$= -1.7$$

0.0

-0.2

-0.4

0.2

0.4

0.6

0.8

$$e_{CVT} = \frac{\text{output shaft revolution}}{\text{input shaft revolution}}$$

Equation (1)

$$e_{CVT} = \frac{1}{1+i_1} \left( \frac{e_{CVU}}{R_{OPG}} + \frac{i_1}{R_{IPG}} \right)$$

$$\begin{aligned} i_1 &: 2.2 \\ R_{OPG} &: 0.7 \\ R_{IPG} &: 0.9 \end{aligned}$$

the point where

"the output shaft is stopped  
while the input shaft is  
rotating"